

Mathematics General Science Test Medium Mode

| Sr | Questions | Answers Choice |
|----|---|--|
| 1 | The formula $a_n = a + (n-1)d$ for an A.P is called | A. nth term of an A.P B. Sum of first n terms C. A.M between a and b D. None of the above |
| 2 | The magnitude of vector $a = i - 3j + 5k$ is: | A. 3 B. $\sqrt{35}$ C. $\sqrt{17}$ D. $\sqrt{35}$ |
| 3 | If $f(x) = x^2 - x$ then $f(0)$ is | A. 0 B. 1 C. 2 D. 3 |
| 4 | Question Image | |
| 5 | The function discontinuous at $x = 0$ is (I) $\tan x$ (II) $\cot x$ (III) $\sec x$ (iv) $\operatorname{cosec} x$ | A. I & III B. I & IV C. II & IV D. II & III |
| 6 | Question Image | |
| 7 | Question Image | A. (2x4) B. (2x7) C. (2x3) D. (7x2) |
| 8 | 99th term of the series $2 + 7 + 14 + 23 + 34 + \dots$ is | A. 9998 B. 9999 C. 10000 D. None of these |
| 9 | Power set of X i.e $P(X)$under the binary operation of union \cup | A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite |
| 10 | Question Image | |
| 11 | The remove the term involving xy , from $7x^2 - 6\sqrt{3}xy + 13y^2 - 16 = 0$ the angel of rotation is | A. $\theta = 30^\circ$ B. $\theta = 45^\circ$ C. $\theta = 60^\circ$ D. $\theta = 75^\circ$ |
| 12 | The area of a sector with central angle of 0.5 radians in a circular region whose radius is 2m is | |
| 13 | If the roots of $x^2 + ax + b = 0$ are non-real, then for all real x , $x^2 + ax + b$ is | A. Negative B. Positive C. Zero D. Nothing can be said |
| 14 | Question Image | |
| 15 | If $A(x_1, y_1)$, $B(x_2, y_2)$ and $C(x_3, y_3)$ are the vertices of a triangle then its centroid is | |
| 16 | Question Image | |
| 17 | The equation $(\cos p - 1)x^2 + x(\cos p) + \sin p = 0$ in the variable x , has real roots, then p can take any value in the interval | A. $(0, 2\pi)$ B. $(-\pi, \pi)$ C. $(0, \pi)$ D. $(\pi, 2\pi)$ |

34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);"><i>π</i>
D. None of these

18 Question Image

19 Question Image

- A. Polynomial of degree 0
- B. Polynomial of degree 2
- C. Quadratic equation
- D. None of these

20 Question Image

- A. A.P.
- B. G.P.
- C. H.P.
- D. None of these